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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,338	10/19/2005	Ludovic Poupinet	123936	5788
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EXAMINER				
HIGGINS, GERARD T				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,338

Applicant(s)

POUPINET ET AL.

Examiner

GERARD T. HIGGINS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 05/18/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 12 is objected to because of the following informalities: the word "medium" on line 3 of claim appears to not be necessary in the sentence. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 13, 16, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants state a percentage of zinc and tellurium; however, they do not state if this is by weight or atomic percentage. For purposes of examination, the Examiner will assume it is by atomic percentage.

With regard to claims 16 and 19, these are improper Markush Group phraseology. By using the phrase "from the group comprising" leads this selection of metals to perhaps include additional metals not mentioned here, and hence the claims are indefinite.

Claim Rejections - 35 USC § 102

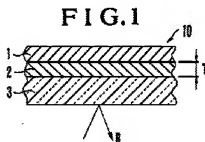
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12, 14, and 17-20 rejected under 35 U.S.C. 102(b) as being anticipated by Shigematsu et al. (EP 0387016).

Shigematsu et al. disclose an optical recording medium having the structure of Figure 1.



With regard to claim 12, Shigematsu et al. disclose a recording layer 2 equivalent to applicants' active layer. The recording medium has a front face from which to receive a laser and a rear-face. The front face is coming from the direction of layer 3 (beam R). The composition of the active layer is disclosed at col. 7, lines 28-45. The formula of

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the composition is $(\text{Te}_x\text{Ge}_{100-x})_{100-y}\text{Zn}_y$, wherein x is greater than or equal to 20 and less than or equal to 90 and y is greater than or equal to 20 and less than or equal to 70. If one chooses $x = 90$ and $y = 65$ you arrive at a formula of $\text{Te}_{31.5}\text{Ge}_{3.5}\text{Zn}_{65}$ and this compound anticipates the claimed ranges of applicants' claim 1 for zinc and tellurium.

With regard to claim 14, the dimensions of the recording layer are disclosed at col. 7, lines 46-49. Included in this range is preferentially 10-150 nm, which completely anticipates applicants' claimed range.

With regard to claims 17, 19, and 20, the protective layer 1 is situated on the rear-face of the recording layer 2. The protective layer composition is disclosed at col. 6, line 46 to col. 7, line 2. It includes metallic materials such as aluminum, and it also may be ultraviolet-curing resins, which are polymers.

With regard to claim 18, the thicknesses of the protective layer 1 is disclosed at col. 6, line 56. Included in this are thicknesses of 10 nm to 100 microns. A thickness of 10 nm anticipates claim 18.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigematsu et al. (EP 0387016), as applied to claim 12, in view of either Stevens (6,177,168) or Holster et al. (4,450,553).

Shigematsu et al. disclose all of the limitations of applicants' claim 12 in section 6 above; however they fail to specifically disclose a semi-reflective layer arranged on the front face having a thickness of 4-10 nm and made of the metals or an alloy of the metals in claim 16.

Shigematsu et al. freely admit at col. 7, lines 1-2 that additional reflective layers may be formed in the base optical recording medium of Figure 1; furthermore, they admit that one can form a thin layer of aluminum metal (10 nm) as the protective layer. The Examiner takes the position that a 10 nm thin layer of aluminum would comprise a semi-reflective layer.

Stevens or Holster et al. both teach semi-reflective layers for use in optical recording media. Stevens teaches a gold semi-reflective layer on the front-face of two recording layers in a dual-sided recording medium. Holster et al. teach a zinc selenide partial reflective layer in a single-sided dual recording layer recording medium (col. 10, lines 31-54).

Since Stevens, Holster et al. and Shigematsu et al. are all drawn to optical recording media, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place an additional layer 10 nm thick semi-reflective layer on the front face side of the recording medium. Semi-reflective layers are well-known in the field of optical recording media, and furthermore one of ordinary skill would

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have recognized that the results of the combination would have been predictable.

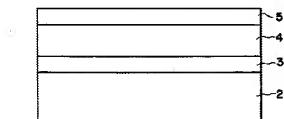
These layers are known to allow tuning of the light intensity that reaches the recording layer or any other subsequent layer. Additionally, one of ordinary skill would have recognized that each of the elements would have performed the same in combination as they had separately.

9. Claim 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigematsu et al. (EP 0387016), as applied to claim 20, in view of Tamura et al. (5,354,590).

Shigematsu et al. disclose all of the limitations of claim 20 in section 6 above; however they fail to disclose using polydimethylsiloxane-based protective layer that has a thickness of 10-100 microns, nor do they disclose that the protective layer is deformable.

Tamura et al. disclose the optical recording medium of Figure 1.

FIG. 1



The device comprises a recording layer **3** and a protective (recording-assistance) layer **4** situated on the back face thereof. The layer **4** is disclosed at col. 3, lines 27-39,

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included in these are silicone rubbers. The thickness of the layer 4 is disclosed at col. 7, lines 8-10, included in this is the range of 3-50 microns. Tamura et al. also disclose a "hardness after cure" at col. 4, lines 28-34. The Examiner takes the position that these hardness factors would include a deformable-type silicone rubber. Additionally, the terms "silicone rubber" and "elastic polymer" both imply a flexible and deformable material.

Since Shigematsu et al. and Tamura et al. are both drawn to optical recording media, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the prior art recording layer of Shigematsu et al. with the recording-assistance/protective layer of Tamura et al. The results of which would have been obvious to one having ordinary skill, specifically one would have expected the sensitivity of the recording layer to improve and the device would have been further protected from mechanical deformation. Additionally, one of ordinary skill would have recognized that each of these elements would have performed the same in combination as they had separately.

Polydimethylsiloxane is a form of silicone rubber and it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a polydimethylsiloxane form of silicone rubber as the silicone rubber layer of Tamura et al.; further, it would have been obvious to vary the hardness of the polydimethylsiloxane to whatever degree desired by applicants. Having the same hardness factors would make these layers completely appropriate for the deformable protective layer of applicants.

10. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (4,405,706).

Takahashi et al. teach a "heat mode" recording layer comprised of the metals seen at col. 3, line 52 to col. 4, line 19. They specifically mention at col. 3, lines 56-58 that the metals may be used alone or in combination, and the preferable metals include zinc and tellurium. The recording layer of Takahashi et al. would necessarily comprise a front face and a rear face; however, Takahashi et al. fail to disclose the specific atomic percentage range of applicants' claim 12 and the more specific exact atomic percentages of applicants' claim 13.

It is well-known in the field of optical recording media to experimentally vary the percentages of metals contained with the alloy of a recording layer, and therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to experimentally vary the atomic percentages of zinc and tellurium in Takahashi et al.'s recording layer to whatever ratio desired by applicants. Takahashi et al. disclose at col. 4, lines 1-11 that zinc and tellurium are known for promoting sensitivity and thermal deformation of the recording layer.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12-22 of this application conflict with claims 12-22 of Application No. 10/535,411. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

12. Claims 12-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12-22 of copending Application No. 10/535,411. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both related to an optical recording medium that has an active layer of inorganic material, a front face, and a rear face; however, the copending Application No. 10/535,411 fails to include an

active layer of the percentages of zinc and tellurium as seen in the present application. Yet one can look to claim 15 of the copending application to see that the percentages of zinc and tellurium are contained within that application, and would form a deformable recording layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see PTO-892. The additional references cited speak towards the level of ordinary skill in the art with respect to heat mode recording (deformation recording) and silicone protective layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERARD T. HIGGINS whose telephone number is (571)270-3467. The examiner can normally be reached on M-F 7:30am-5pm est. (1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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